CLAIMS

1. Polypeptide capable of interacting specifically with the oncogenic forms of p53, of stimulating cell growth and of blocking the antiproliferative effects of the wild-type form of p53.

2. Polypeptide according to claim 1, characterized in that it comprises all or part of a sequence chosen from the polypeptide sequences SEQ ID No. 9 or SEQ ID No. 16 or a derivative thereof.

3. Polypeptide according to claim 1, characterized in that it comprises all or part of a sequence chosen from the polypeptide sequences SEQ ID No. 31 or SEQ ID No. 22 or a derivative thereof.

4. Polypeptide according to claim 1, characterized in that it comprises all or part of the polypeptide sequence SEQ ID No. 33 or a derivative thereof.

5. Polypeptide according to claim 3, characterized in that it is represented by the polypeptide sequence SEQ ID No. 22.

6. Nucleotide sequence encoding a polypeptide as defined according to one of claims 1 to 5.

7. Nucleotide sequence according to claim 6, characterized in that it comprises all or part of the sequence SEQ ID No. 15 or SEQ ID No. 21 or their derivatives.

8. Nucleotide sequence according to claim 6, characterized in that it comprises all or part of the nucleotide sequence SEQ ID No. 32 or its derivatives.

9. Nucleotide sequence according to claim 6 or 7, characterized in that it comprises the sequence SEQ ID No. 15 or the sequence SEQ ID No. 30.

10. Nucleotide sequence according to claim 6, 7 or 9, characterized in that it is represented in SEQ ID No. 21.

11. Host cell for the production of a polypeptide according to one of claims 1 to 5, characterized in that it was transformed with a nucleic acid containing a nucleotide sequence according to one of claims 6 to 10.

12. Method for preparing a polypeptide according to one of claims 1 to 5, characterized in that a cell containing a nucleotide sequence according to one of claims 6 to 10 is cultured under conditions for expressing said sequence, and the polypeptide produced is recovered.

13. Expression cassette comprising a nucleotide sequence encoding a polypeptide according to one of claims 6 to 10.

14. Vector comprising a nucleotide sequence according to one of claims 6 to 10.

15. Vector according to claim 14, characterized in that it is a plasmid vector, a cosmid or any DNA not encapsidated by a virus.

16. Vector according to claim 14, characterized in that it is a recombinant virus, and preferably a recombinant virus which is defective for replication.

17. Antisense oligonucleotide having a sequence according to claim 7 to 10 capable of at least partially inhibiting the production of polypeptides according to one of claims 1 to 5.

18. Nucleotide probe capable of hybridizing with a nucleotide sequence according to one of claims 7 to 10 or the corresponding mRNA.

19. Antibody or antibody fragment directed against a polypeptide according to one of claims 1 to 5.

20. Antibody or antibody fragment according to claim 19, characterized in that it is directed against a sequence chosen from the peptide sequences presented in SEQ ID No. 9 or SEQ ID No. 33 or SEQ ID No. 31 or SEQ ID No. 22.

21. Antibody or antibody fragment according to claim 19 or 20, characterized in that it possesses the ability to prevent the interaction between the oncogenic forms of p53 and a polypeptide according to one of claims 1 to 5.

22. Method for detecting or identifying compounds capable of binding with a polypeptide as defined according to one of claims 1 to 5, characterized in that the following steps are carried out:

a - a molecule or a mixture containing various molecules, optionally unidentified, is brought into contact with a polypeptide as defined according to one of claims 1 to 5 under conditions allowing interaction between said polypeptide and said molecule in the case where the latter might have affinity for said polypeptide, and,

b - the molecules bound to said polypeptide are detected and/or isolated.

23. Method for detecting or identifying compounds capable of modulating or inhibiting the interaction between between the oncogenic forms of p53 and a polypeptide according to one of claims 1 to 5, characterized in that the following steps are carried out:

a - the oncogenic form of p53 or a fragment thereof is bound to said polypeptide;

- a compound to be tested for its capacity to inhibit the binding between the oncogenic form of p53 and said polypeptide is added,

- the displacement or the inhibition of the binding between the oncogenic form of p53 is determined;

- the compounds which prevent or which impede the binding between the oncogenic form of p53 and said polypeptide are detected and/or isolated.

24. Ligand for a polypeptide as defined according to claims 1 to 5, which is capable of being obtained according to the method of claim 22.

25. Ligand capable of modulating or inhibiting the interaction between the oncogenic forms of p53 and a polypeptide as defined according to claims 1 to 5, which is capable of being obtained according to the method of claim 23.

26. Use of a ligand according to claim 24 or 25 for the preparation of a medicament intended for the treatment treatment of diseases involving a cell cycle dysfunction.

27. Use of a polypeptide capable of interacting with the oncogenic mutated forms of p53 and comprising all or part of a peptide sequence chosen from the sequences SEQ ID No. 9, No. 33, No. 31 or No. 22 or a derivative thereof according to one of claims 1 to 5 for the production of a nonpeptide or nonexclusively peptide compound capable of interacting with the oncogenic mutated forms of p53, by determining the structural components of this polypeptide which are important for its activity and reproducing these components by nonpeptide or nonexclusively peptide structures.

28. Pharmaceutical composition comprising, as active ingredient, at least one antibody or antibody fragment according to one of claims 19 to 21, and/or an antisense oligonucleotide according to claim 17 and/or a ligand according to either of claims 24 and 25 and/or a compound according to claim 27.

29. Composition according to claim 28 intended for the treatment of diseases involving a cell cycle dysfunction.

30. Composition according to claim 29 intended for the treatment of cancers.